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ABSTRACT

Reported is the 1969-70 school year of Vermont's Consulting Teacher Program (Chittenden Central) during which consultants assisted 29 elementary school teachers in providing special educational services to 109 students, of whom the majority were placed in regular classrooms. Program services are described as encompassing direct consultation, weekly workshops for classroom teachers, parent conferences, and provision of special learning materials to all program participants. Included are reports of parent and teacher projects which focused on such topics as increased attending behavior of a first grade girl; changes in accuracy and number of arithmetic problems done by a second grade boy; increasing study behavior as a result of decreasing inappropriate responses; and dawdling at suppertime. (GW)

SUMMER PROGRAM
SPECIAL EDUCATION PROGRAM
UNIVERSITY OF VERMONT

THE
1969-1970
REPORT

of the

CONSULTING TEACHER PROGRAM

U.S. DEPARTMENT OF HEALTH
EDUCATION & WELFARE
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of

The College of Education, University of Vermont;
Division of Special Educational and Pupil Personnel Services
of the Vermont State Department of Education

and

THE CHITTENDEN CENTRAL
SCHOOL DISTRICT

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IN THE CHITTENDEN CENTRAL
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Education, University of Vermont; the
Division of Special Educational and
Pupil Personnel Services, Vermont State
Department of Education; and the Chittenden
Central School District under Title VI-A,
ESEA.

Submitted by:

Mrs. Marilyn Cleveland

Mrs. Shirley Humphreys

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PREFACE

The Consulting Teacher Program is a cooperative effort of the College of Education, University of Vermont; the Division of Special Educational and Pupil Personnel Services, Vermont State Department of Education; and Chittenden Central School District.

This program has been an integral part of the Chittenden Central School District for two years, 1968-1969 and 1969-1970. During this time, two consulting teachers-in-training, Mrs. Marilyn (Dick) Cleveland and Mrs. Shirley Humphreys, have carried out the program's activities.

A report of the activities and results of the first year may be found in "The 1968-1969 Report of the Consulting Teacher Program, Volumes I and II." Copies of both volumes may be obtained from the Consulting Teacher Program central office, 2 Colchester Avenue, Burlington.

The present report has been prepared so that administrators, teachers, parents, and others in the Chittenden Central School District may review the activities and results of the 1969-1970 Consulting Teacher Program in this district.

PARTICIPANTS

We wish to acknowledge the support, cooperation, and assistance of the following people:

Hazen F. Wood, Superintendent

Miss Beryle Gardner, Elementary Supervisor

John R. Burnett, Curriculum Coordinator

COLCHESTER

George E. Costello, Principal

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Mrs. Cynthia Feldman, 1st grade

Union Upper School

Mrs. Marjorie Durett, 4th grade

Mrs. Sharon Larkin, 4th grade

ESSEX CENTER

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Howard J. Magnant, Assistant Principal

Birchwood School

Mrs. Barbara Clough, release day teacher for

Mrs. Cleveland, 2nd grade

Mrs. Sophia Mayer, teacher-aide for Mrs. Cleveland

Mrs. Grace Pigeon, 1st grade

Miss Marie Stocking, 3rd grade

Main School

Miss Cheryl Ahokas, 1st grade

Mrs. Kathryn Bigelow, 2nd grade

Mrs. Delphine Orzell, 1st grade

Mrs. Charlene Staples, 2nd grade

White School

Mrs. Marjorie Devlin, 3rd grade

Mrs. Ann Osborne, 3rd grade

ESSEX JUNCTION

Chittenden Area Special Classes

Mrs. Sherry Chaisson, level one

Mrs. Martha Osmer, level one

Mrs. Pauline Roderer, teacher-aide

Hiawatha School

Edward F. Heyman, Principal

Miss Elizabeth Barrows, 2nd grade

Mrs. Nancy Gilman, 1st grade

Mrs. Helena Jackman, 1st grade

Mrs. Isabel MacGibbon, 1st grade
Mrs. Madelon Ohl, teacher-aide to Mrs. Humphreys
Miss Patricia Seaver, 5th grade
Mrs. Mary Taft, 4th grade
Mrs. Margaret Williams, 2nd grade

Summit Street School

Robert A. Rouleau, Principal

Mrs. Lucille Allen, 3rd grade
Mrs. Alice Brown, 2nd grade
Mrs. Barbara Grady, 4th grade
Mrs. Frances Patrick, school nurse
Mrs. Joanne Rush, 4th grade
Mrs. Linda Searles, transitional first/second grade

WESTFORD

Westford Elementary School

Ronald J. Gates, Principal

Mrs. Betty Fay, 4th grade
Mrs. Kathleen Dates, 5th grade

CONSULTING TEACHER PROGRAM

Rationale and Goals

Handicapped learners* comprise a substantial proportion of the public school population in Vermont. The Vermont State Department of Education uses a 10 percent expectancy estimate (Keller, 1968) to determine the approximate number of handicapped learners in Vermont public schools. Based upon the 10 percent expectancy, an estimated 243 handicapped learners in grades one through five were in Chittenden Central schools during the 1969-70 school year. This figure is probably conservative, as other recent estimates of the handicapped population range from 15 to 20 percent.

Approximately 75 handicapped learners within the Chittenden Central School District were placed full-time in special classes. Other handicapped learners were removed from their regular classes part-time for instruction with one or more special teachers in reading, speech, and motor-perception training. These children remained in their regular classrooms the majority of the time with regular class teachers. Thus, for most of a school day, approximately 170 handicapped learners were in regular classrooms conducted by regular class teachers.

The Consulting Teacher Program provided consultation to 29 Chittenden Central elementary school teachers involving a total of 86 children. Special Educational services were provided to 23 other children who were specifically identified as handicapped

* The term handicapped learner refers to those children who are mentally retarded, emotionally disturbed, and/or learning disabled.

learners. Services, in addition to direct consultation, included weekly workshops for classroom teachers, parent conferences, and provision of special learning materials which were made available to all program participants.

Consulting Teacher Program services were provided by two consulting-teachers-in-training (CTITs), Mrs. Marilyn (Dick) Cleveland and Mrs. Shirley Humphreys, a University consulting teacher, Mrs. Betsy Schneider, and a psychologist, Dr. Wayne L. Fox. During the first year of the program (1968-69) the two CTITs were released one day per week from their regular classroom duties to fulfill University coursework requirements and to provide requested consultation services to other elementary classroom teachers. During the second year of the program (1969-70), CTITs were initially provided two release days per week for academic work and consultation. At the beginning of the spring semester, one CTIT (Mrs. Humphreys) was released from all classroom responsibilities so that she could provide consultation services on a full time basis.

Teacher Workshops

A workshop for elementary teachers which offered three credits toward Vermont certification requirements was held weekly throughout the 1969-70 school year. The purpose of the workshop was to provide training for classroom teachers so that they could develop the skills necessary for managing and educating handicapped learners within their classrooms. Workshop topics included techniques for individualizing instruction, the analysis of classroom behavior, classroom observation and measurement, use of special learning materials, and presentation and discussion of specific procedures which have proved

successful in the modification of the preacademic, academic and social behavior of handicapped learners. Each workshop participant conducted a service/research project involving a handicapped learner in his own classroom. Thirteen identified handicapped learners received services from workshop participants. Behaviors which were modified by workshop participants included attending behavior, talking out, thumbsucking, study behavior, acquisition of arithmetic number facts, and acquisition of reading vocabulary words. Five of these projects are presented in the Service/Research section of this report.

Consultation

Seventeen elementary classroom teachers who did not participate in the teacher workshop received consultation services from CTITs and other program staff. Services to these consultees varied greatly. Some consultees were seen only a few times; others received comprehensive services and successfully completed service/research projects in their classrooms. Program services to consultees included aid in developing classroom observation and measurement procedures, weekly classroom observations, weekly conferences to discuss specific procedures for modifying the behavior of handicapped learners, and help in individualizing instruction and using special learning materials which were made available by the program.

Nine identified handicapped learners received special educational services in the classrooms of consultees. Behaviors that were modified by consultees included attending behavior, thumbsucking, aggressive behavior, and out of seat behavior.

Parent Conferences

Individual conferences were held with the parents of each of the identified handicapped learners served in the Chittenden Central school district. At these conferences the classroom teacher and the CTIT discussed with the parents the particular procedures being used to modify the classroom behavior of their children. Whenever possible, the aid of the parents was enlisted to provide support in the home for appropriate classroom behavior. In all cases the parents' written permission was obtained for their child to participate in the program.

In addition to individual parent conferences, parents were invited to participate in monthly workshops administered by CTITs. Topics covered at the parent workshops included basic principles of behavior analysis and procedures for observation and measurement of defined behaviors. Eight parents attended workshops regularly and conducted successful service/research projects for their children at home. The following behaviors were modified by parents: tidiness, thumbsucking, dawdling at meals, bossiness, hanging up clothes, wearing an eye patch, bed wetting, aggressiveness, getting ready for school, and finishing food on plate at mealtimes. Two parent projects are presented in the Service/Research section of this report.

Special Learning Materials

Special learning materials were made available to all program participants. Materials included standard elementary texts not available in the school district, texts developed especially for handicapped learners, and supplementary materials

for use with standard texts. Materials were made available in the curriculum areas of reading, arithmetic, language arts, penmanship, science, and social studies. In addition to those commercially produced, learning materials developed by the Consulting Teacher Program staff were also used extensively by participants. These materials were programmed for individual learners in both reading and arithmetic. In several classrooms these materials were used for all children in the class to provide a completely individualized academic program. One such individualized reading program for 23 first graders is described in the Service/Research section of this report.

Other Activities

CTITs and program participants from Chittenden Central school district participated in a number of additional activities during the school year. At the end of the school year both CTITs were on schedule in their M. Ed. program at the University. CTITs made presentations describing the program to teachers and administrators in this district and in other districts throughout Vermont. Program staff, with the cooperation of district administration personnel, successfully sought and received federal funding for a three year program which will extend the services of the Consulting Teacher Program in the Chittenden Central school district to an estimated 80 handicapped learners for the 1970-71 school year. In the spring, program participants were invited to the First Annual Behavioral Education Convention where two consultees made presentations. Also, in the spring, CTITs attended a Leadership Training Institute in Washington, D. C., sponsored by the Bureau of Education Professions Development, to promote community involvement in educational decisions.

Summary and Conclusions

The Consulting Teacher Program provided special educational services to 23 identified handicapped learners and their parents in the Chittenden Central School District during the 1969-70 school year. Twenty-nine elementary teachers received consultation services, nine of whom also successfully completed an accredited in-service workshop. Other activities included presentations to teachers and administrators, participation in professional meetings and fulfillment of University M. Ed. coursework requirements.

Program objectives of participants, CTITs, and program staff could not have been achieved without the excellent cooperation and active involvement of the Chittenden Central administrative staff, building principals, and other supporting professionals.

SERVICE/RESEARCH PROJECTS

The following service/research projects were conducted by workshop participants, consultees, and parents during the 1969-70 school year. Projects were selected to be representative of the behaviors modified and procedures used. The names of all learners described in the projects are fictitious to preserve their anonymity.

INCREASED ATTENDING BEHAVIOR OF A FIRST-GRADE GIRL

by

Mrs. Grace Pigeon and Mrs. Marilyn Cleveland

Subject and Setting

Vivian was a six-year-old girl in a heterogeneously grouped first-grade class of 20 children. She was selected for study because of her disruptive behavior which often annoyed other children, her short attention span, and an apparent lack of interest in school.

Behavior Definition

The objective of this study was to increase Vivian's attending behavior, which was defined as face orientation toward work paper, book and perception game on her desk, or toward a story which was written on the board when she was directed to complete a copying assignment. She was also considered to be attending when obtaining work materials (such as a pencil or crayons) from her desk, leaving the room for a three minute period to use the bathroom, or obtaining help at a fellow student's desk if her work was with her. Upon completion of assigned work, permissible behavior was quietly obtaining and playing a "learning game", alone or with a "buddy".

Materials

Work materials each day included some combination of the following: a penmanship paper, phonics work, alphabet words, a "self-help" sheet, or arithmetic work.

Data Recording and Reliability Procedures

Attending behavior was sampled at three minute intervals

during an independent seatwork period from 9:00 to 10:15. Ten measures of attending behavior were recorded during 30 minutes of this period. The teacher used a three-minute egg timer to cue herself for sample times. The first sample recorded at the end of the first three minutes indicated when the sand in the top half of the glass had run into the bottom half. The teacher turned the egg timer over and replaced it on the table. She then looked at Vivian and recorded a "+" if she was engaged in permissible behavior. If she was engaged in other behaviors, a "-" was recorded.

Occasionally, another observer measured attending behavior with the teacher. The observer was cued for sampling by the tap of the timer as it was returned to the table by the teacher. These reliability observations were made at least once in each condition, and six times in Condition II. Measures recorded by the teacher and observer were compared interval by interval. Agreement on these measures averaged 93%.

The teacher and observer both tallied each time the teacher praised Vivian when she was attending.

Condition I: Baseline Procedures

During Condition I, the teacher worked at the reading table with one small reading group after another. Children not in the reading group at the table worked on assigned seatwork activities.

The teacher occasionally reminded individuals to attend to their seatwork and praised the whole group for being "good quiet workers". She seldom directed praise to individual children, and never directly praised Vivian during this condition. For 17 days

Vivian's attending behavior averaged 53%, ranging from 22% to 80%.

These results are shown in Figure 1. Daily percent of attending behavior shown on the graph were calculated by dividing the total number of "+" intervals by ten, multiplied by 100. The open circles are observer measures and the closed circles are teacher measures. Large closed circles indicate perfect agreement between teacher and observer.

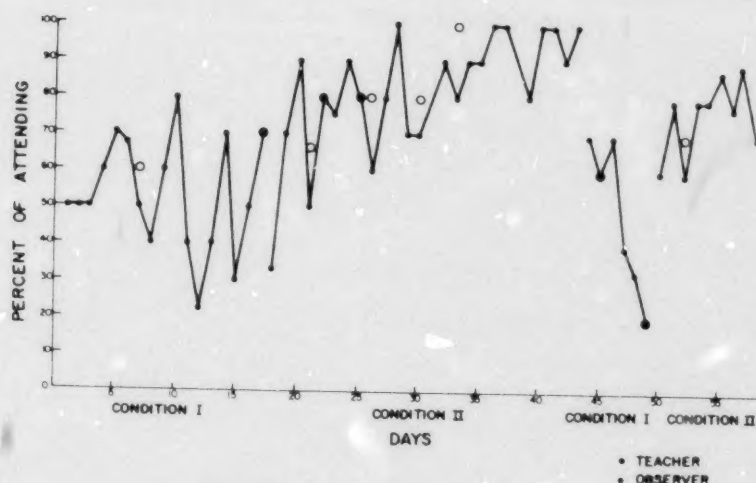


Figure 1. A record of Vivian's attending behavior.

Condition II: Teacher Praise Contingent Upon Attending Behavior

On the 18th day the teacher verbally praised Vivian whenever she was attending to her assigned work. For 26 days the number of praises averaged eight, ranging from three to eleven. Attending behavior increased to an average of 82%, ranging from 34% to 100%.

Condition I: Return to Baseline Procedures

For six days the teacher returned to the same procedures she had used during the first period, that is, no direct verbal praise for Vivian. Figure 1 shows the marked decrease in Vivian's attending behavior. On the sixth day it dropped to 20%. The average for the period was 49%, ranging from 20% to 70%.

On the first day of this period, as the teacher praised several of the children for good work, Vivian was heard to say, "and Vivian, too". On the third day, as her teacher stood with two others on the playground, Vivian walked up to them. She said to one teacher, "You have a pretty dress on," and to the second teacher, "I like your hair." She looked at her own teacher, said not a word, then turned and walked away.

Condition II: Return to Contingent Teacher Praise

The teacher again directed verbal praise to Vivian when she was attending to her assigned work. For the nine days shown in Figure 1 attending behavior increased to an average of 76%, ranging from 60% to 90%. This increase occurred even though the amount of teacher praise was reduced to an average of four, ranging from three to seven. The amount of praise averaged only half that of the previous Condition II procedure.

Discussion

The teacher continued to praise Vivian for attending to her work, and for the next 19 days not shown in Figure 1 the number of praises averaged only three per period, ranging from one to six. Attending behavior continued to increase and averaged 81%.

The teacher gradually decreased the amount of praise for

Vivian to that more nearly equalling praise given by other teachers. (This may be the amount of praise available to Vivian from her teacher next year.) The teacher noted that Vivian was no longer disruptive and inattentive. She completed her work carefully and neatly. She became a good "buddy" when working with others. In additon, Vivian was promoted to a regular second-grade class.

MODIFICATION OF THUMBSUCKING

by

Mrs. Nancy Gilman and Mrs. Shirley Humphreys

Pupil and Classroom

Carol, a six-year-old girl, was one of 23 children in a regular first-grade class. Her mother reported that Carol had started sucking her right thumb in early childhood. Thumbsucking continued in school and interfered with Carol's academic performance.

Behavior

Thumbsucking was defined as whenever the right thumb was inserted in the mouth.

Data Recording and Reliability Procedures

Carol's thumbsucking was recorded daily at 1:00 p.m. when the teacher read to the children. The teacher recorded the time when she started reading and the time when she finished. Reading usually lasted 15 minutes. Whenever Carol's thumb was in her mouth during this period, the teacher activated a stop watch. When the thumb was out of the mouth the watch was stopped. Daily percentages of thumbsucking were calculated by dividing the cumulated thumbsucking time, by the total minutes of story time, multiplied by 100. Approximately once a week another observer recorded data in the same manner as the teacher. Agreement between thumbsucking time recorded by the teacher and observer averaged 95%.

Condition I: Baseline Procedures

During the baseline conditions, the teacher read from story-books containing many pictures which were held up to the class as

the story progressed. While showing pictures, the teacher asked questions of the class as a whole, such as, "What do you think the rabbit will do next?" She seldom directed a remark to one child.

Figure 1 is a record of Carol's thumbsucking during the story period. During the 16-day baseline period, thumbsucking occurred, on an average, 94% of the time.

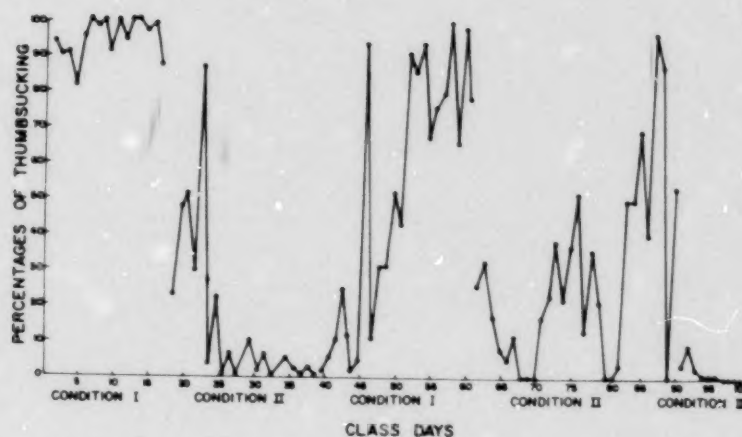


Figure 1. A record of Carol's thumbsucking.

Condition II: Contingent Teacher Praise

On the 17th day during a class discussion just before the story was read, the children identified the following behaviors as those demonstrated by a "good audience": hands folded and on the desk, sitting up straight with face and eyes directed toward the reader, and feet on the floor under the desk. For several weeks these behaviors were reviewed just before the story was read.

When all members of the class assumed "good audience" position, the teacher started to read. Thereafter, through the school year, the teacher waited for the "audience position" before she started to read. Occasionally she prompted by saying, "Where are your hands and feet?"

The teacher verbally praised those children adopting the "good audience" position. Carol was always included among those who received praise if she demonstrated the appropriate behavior. Praise remarks included statements such as, "Good, _____, I like the way you are sitting." If Carol was thumbsucking, the teacher praised those children seated around her. Usually, Carol assumed "good audience" position and was then praised. Figure 1 shows that during the 22 days of Condition II, thumbsucking decreased. For the first eight days the behavior was variable, ranging from a low of 4% to a high of 87%, and averaging 36%. However, for the following 14 days, thumbsucking stabilized and averaged 3%. For the entire period thumbsucking averaged 15%.

Condition I: Return to Baseline Procedures

To verify that teacher praise was the variable controlling the change in thumbsucking, the teacher no longer verbally praised "good audience" position. She made remarks to the whole class about the story and pictures, as she had during baseline period. During the 22 days of this procedure, Carol's thumbsucking increased to an average of 52%.

Condition II: Return to Contingent Teacher Praise

When the teacher again praised children contingent upon "good audience" position, Carol's thumbsucking fluctuated, ranging from 0% to 97%, and averaging 26% for the 29 days of this period.

Condition III: Withhold Story Reading

In an attempt to eliminate the variability of Carol's thumbsucking, the teacher continued to praise "good audience" position, and she introduced a consequence for thumbsucking behavior. When Carol's thumb was in her mouth, the teacher stopped reading. She looked at the classroom wall and avoided eye contact with the children. When Carol removed the thumb from her mouth, the teacher continued the story. Thumbsucking immediately decreased to an average of 1% for 18 days. The results of the first ten days of this procedure are shown in Figure 1.

Discussion

Because the consequences of withholding story reading was so effective in modifying Carol's thumbsucking behavior, the teacher decided to include several other children in the contingencies. These children had started thumb, fist, or finger sucking several weeks after school began. For the remainder of the school year, during the story time, the teacher stopped reading whenever any child in the class was thumb, fist, or finger sucking. This procedure virtually eliminated the behavior.

CHANGES IN ACCURACY AND NUMBER OF PROBLEMS COMPLETED IN ARITHMETIC:
A SECOND-GRADE BOY

by

Mrs. Marilyn Cleveland and Mrs. Sophia Mayer

Third-grade teachers have often complained that children come from second grades with inadequate knowledge of basic addition and subtraction facts. In an attempt to insure that second-grade children would indeed learn the basic number facts, a teaching/learning procedure was arranged in which the facts were first taught, then tested almost daily. The teaching/learning procedure provided for precise measurement of rate changes in number of problems completed and accuracy of computation of all the children in the class. This study describes the procedures used with one child who initially showed little improvement in rate of accuracy of completed problems.

Subject and Setting

Steve was seven years old, in a heterogeneously grouped second-grade class of 20 children. In the first grade the previous year, his inaccurate performance in arithmetic had led his first grade teacher to stress accuracy in computation with a resultant decrease in the rate at which Steve completed his arithmetic assignments.

Behavior

The academic behavior was defined as the number of complete and correct responses on a two-minute time test in arithmetic. A teacher-prepared worksheet consisting of 100 addition and subtraction problems was given every pupil each day. Each problem contained two one-digit numbers from 0 through 9. The same basic

number facts were on each worksheet but arranged in a different order from day to day.

Data Recording and Reliability Procedures

The total number of responses completed and the total number correct were recorded daily for each child in the class. Immediately following the daily two-minute time-test the teacher-aide corrected the papers and recorded the two scores at the top of each paper. A second observer also scored the responses once a week. In cases of disagreement on the scores, the papers were rechecked until 100% agreement was reached.

Procedure 1

A stop watch was used to measure the two-minute period which started at 8:45 each morning. The instruction, "You may begin," was given by the teacher. At the end of the two minutes, the teacher said, "Stop, please," and papers were collected.

The teacher did not interact with the children during the two minutes nor was any feedback given concerning elapsed time or pupil progress.

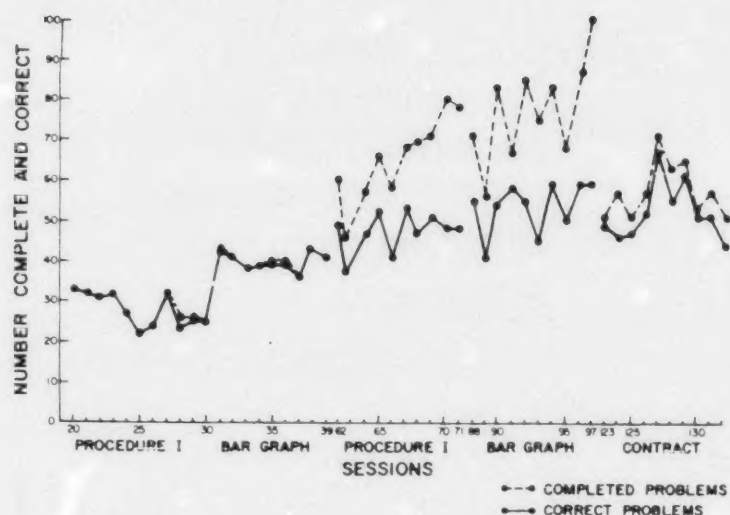


Figure 1. A record of the number of arithmetic problems completed and the number correct on a two-minute time-test. The data points represent only the last 10 days of each procedure.

Procedure 1 extended for 29 days. Steve completed an average of 25 arithmetic responses each day, ranging from 15 to 33. The number of correct responses averaged 24 and ranged from 12 to 33.

Bar Graph Condition

Preceding each daily time-test, the teacher showed Steve a bar graph with the number of correct answers obtained during the previous day's two-minute time-test. Steve was instructed to color the bar to the point which represented the number of examples correctly completed if there had been an increase over the previous day, or if the number remained the same. Verbal praise from the teacher accompanied her instructions. If there had been a decrease, the bar graph was placed on Steve's desk and no praise was given. On those occasions, he was instructed not to color the bar graph. This procedure was carried out for 10 days.

Results showed an increase in both number completed and number correct. Steve completed an average of 39 problems, ranging from 25 to 43. Correct problems averaged 38, ranging from 25 to 43.

Return to Procedure 1

The teacher returned to her original procedure in which she no longer gave Steve the bar graph nor praised him for increases. This procedure was continued for 32 days. Steve's rate of academic performance continued to increase and averaged 51 problems completed, ranging from 31 to 80. The average number of problems correct increased slightly to 43, ranging from 25 to 57.

Bar Graph Condition

The bar graph was again presented to Steve each day just before the time-test. For 26 days, the average number completed each day showed a large increase over the previous period. The average was 73, ranging from 56-100. The number correct showed a smaller increase, averaging 50 and ranging from 39-61. In Figure 1, this is depicted by the separation of the solid and broken lines. On day 97, he completed all problems; however, only 59% were correct.

Contract Condition

Analysis of Steve's work revealed that many of his incorrect responses were zero answers. The contract condition was introduced to decrease these inappropriate responses. On the first day of the contract procedure, the teacher showed Steve one of his previous papers on which he had made many inappropriate zero responses. A verbal contract was made with Steve. The teacher told him she would like him to mark down zeros only when they were correct

answers. She told him that on days he made fewer or the same number of incorrect zero responses as on the previous day, he could earn time for some activity of his choice. During this condition, on days when he met the criterion, Steve listened to a record immediately following the time-test. The procedure for presenting the bar graph remained the same.

For the 35 days of this procedure, the number of incorrect zero answers averaged 1, ranging from 0 to 16. The 16 incorrect zero responses occurred on the first day of this period. The number of completed responses decreased to an average of 54, ranging from 41 to 75. Correct responses averaged 46 and ranged from 30 to 67. The average number of problems completed and the number correct were now more nearly equal as Figure 1 shows.

Discussion

At the end of his second-grade year, Steve completed, on the average, twice as many facts each day as he had in September. His performance in accuracy was improved over that occurring during a large part of the school year. At the end of the school year, Steve advanced to a regular third grade.

INCREASING STUDY BEHAVIOR AS A RESULT OF DECREASING
INAPPROPRIATE RESPONSES

by

Miss Patricia Seaver and Mrs. Shirley Humphreys

This service/research project was conducted in the "slower" of three departmentalized fifth-grade groups studying Social Studies and English. In an attempt to develop good study behavior among these children, the teacher implemented reinforcement procedures for all 12 pupils during their Social Studies and English classes. Generally, children received attention only when they were demonstrating appropriate classroom behavior. Inappropriate behaviors were ignored.

Behaviors

The teacher measured the study behavior of three pupils who had been reported by previous teachers to be "problem" children. Study behavior was defined as the pupil's face oriented toward:

(1) books, papers, maps, overhead projector, chalkboard, and other materials designated by the teacher.

(2) the teacher or another student reciting to the class.

While recording study behavior, the teacher also measured inappropriate responses. Inappropriate behavior was defined as:

(1) out of seat (except when going to "basement", to sharpen pencils, to patrol duty, or to fire drill).

(2) talking out.

(3) interrupting the teacher.

- (4) talking to peers (except during peer projects designated by the teacher).
- (5) vocal noises, such as whistling and humming.
- (6) motor noises (physical contact with any object other than instructional tools designated by the teacher, i.e., banging, knocking, etc.).

Data Recording and Reliability Procedures

Frequencies of inappropriate responses for the three children were recorded daily during Social Studies and English periods. Study behavior was sampled at two minute intervals for 30 minutes during these same classes. The teacher recorded a "+" if the child was attending and a "-" if he was not. At each recording time, the teacher always looked at the three pupils in the same order and then recorded the data. During this same interval, a tally was made when an inappropriate behavior occurred. An observer periodically recorded pupil behaviors with the teacher. The observer was cued at sample time by eye contact and a head nod from the teacher. Percentage of agreement for study behavior averaged 92%, ranging from 70% to 100%. Frequencies of inappropriate responses tallied by the teacher and observer matched closely.

Procedure I: Contingent Teacher Attention

During the data collection period the teacher directed a class discussion and called upon children who raised their hand. Following the oral discussion, related written work was assigned. During the independent work time, the teacher circulated around the class and spoke with those children who were studying quietly. She sometimes reminded pupils to attend to their work.

Procedure II: Contingent Teacher Attention and Consistent Ignoring

On the first day of Procedure II, at the beginning of the Social Studies period, the pupils identified behaviors appropriate for good class discussions. No mention was made of appropriate behaviors at the beginning of the English class which immediately followed the Social Studies period. However, during both classes, the teacher verbally praised children who demonstrated these behaviors. During both periods, she consistently ignored all inappropriate responses noted in the definition.

Procedure III: Teacher Attention to Inappropriate Responses

During Procedure III the teacher no longer ignored inappropriate behavior. Whenever children emitted inappropriate behaviors, the teacher reminded them to return to work, to sit down, or other reminders usually used for classroom management. The teacher continued to attend to quiet study behavior.

Procedure II: Return to Contingent Teacher Attention to Appropriate Behavior and Consistent Ignoring of Inappropriate Behavior

Procedure II was reinstated. The teacher frequently attended to children who were demonstrating appropriate behavior and consistently ignored inappropriate behavior.

Results

ALLAN

Allan was a 10 year old boy whose former teachers reported that he had poor work habits, engaged in disruptive behavior, lacked interest in school, and had a history of irregular school attendance. He had been absent from school an average of 21

days each of the previous four years. In the fall of 1969, on the Otis-Lennon Quick-Scoring Mental Ability Test, Allan scored within the normal range. On the Iowa Test of Basic Skills, he scored slightly below grade level.

Table 1 is a record of Allan's inappropriate responses and study behavior. Percentages of study behavior were calculated by dividing the total number of "+" scores by the total number of samples taken, multiplied by 100.

Table 1. Average number of inappropriate responses and percentages of study behavior in each procedure for Allan.

	Procedure I	Procedure II	Procedure III	Procedure II
Study behavior	83%	97%	93%	97%
Inapprop. resp.	9	2	5	2

The data indicates that there was a decrease in inappropriate responses and a concurrent increase in study behavior during Procedure II, when the teacher consistently ignored inappropriate responses and attended to appropriate responses. During Procedure III, when the teacher attended to inappropriate responses, these responses occurred at higher rates than in Procedures I and II, even though study behavior remained relatively constant.

Allan's former high rate of absenteeism was reduced to four days during the school year. Near the end of the year, the three teachers in the department described his behavior as cooperative and eager. One teacher said his behavior "is proof of what a little praise and encouragement can do."

KATHY

Kathy was an 11-year-old girl who had repeated second grade. Because her work was below grade level at the end of the fourth grade, she was placed in the fifth grade on a "transfer" basis. In the fall of 1969, on the Iowa Test of Basic Skills, Kathy scored at 4.1 grade level. In the fall of 1967, on the Otis-Lennon Quick-Scoring Mental Ability Test, she scored 101. Two years later, in the fall of 1969, she scored 87. Fourth-grade teachers reported that she had difficulty settling down to work and had great need of special help. A year ago her mother described her as in "constant rebellion" at home.

Table 2 is a record of Kathy's inappropriate behavior and study behavior under the conditions of this study. It can be seen that her inappropriate behavior decreased and her study behavior increased as a function of teacher attention during Procedure II.

Table 2. Average number of inappropriate responses and percentages of study behavior in each procedure for Kathy.

	Procedure I	Procedure II	Procedure III	Procedure II
Study behavior	85%	98%	93%	97%
Inapprop. resp.	8	1	4	2

EARL

Earl was an 11-year-old boy who had repeated first grade. Previous teachers described him as immature. They reported that

he had difficulty settling down and following instructions. Last year he had been the subject of a project to increase his attending behavior conducted by his fourth-grade teacher, assisted by a consulting teacher-in-training. The fifth-grade teacher wished to continue monitoring his progress on a daily basis. In the fall of 1967, on the Otis-Lennon Quick-Scoring Mental Ability Test, he scored below the normal range. However, in the summer of 1969, on the Wechsler Intelligence Scale for Children, he scored within the normal range.

Table 3 indicates that the frequency of Earl's inappropriate behavior and study behavior was a function of teacher attention. Near the end of this school year, department teachers stated he had settled down and seemed to have matured. However, his behavior varied and inappropriate responses still occurred.

Table 3. Average number of inappropriate responses and percentages of study behavior in each procedure for Earl.

	Procedure I	Procedure II	Procedure III	Procedure II
Study behavior	86%	96%	93%	97%
Inapprop. resp.	7	2	3	5

Summary

The results of this project indicate that acceptable study behavior occurred most frequently when inappropriate responses were consistently ignored and pupils were given teacher attention contingent upon good study habits.

ACQUISITION OF VOCABULARY WORDS

by

Mrs. Shirley Humphreys and Mrs. Madelon Ohl

For children to read a story fluently, they must first be able to readily identify those individual vocabulary words found in the story. There are a number of different ways that children can learn vocabulary words. This study describes a method of continuous precise measurement of pupil performance on vocabulary word cards for an entire class of first graders.

Children and Settings

This project was conducted with 23 children in a heterogeneously-grouped regular first-grade class. A few of the children had attended kindergarten. Although no formal pre-test was administered to measure reading performance at the beginning of the school year, it was determined that most of the children knew some of the names of the letters of the alphabet and a few children could read some words. The project was started at the end of October after all of the children had been exposed to reading readiness activities from the beginning of school.

Definition of Behavior

A correct reading response was defined as reading a single word correctly on the first try when presented an individual word card.

Instructional Materials

Individual packs of word cards were prepared for each child. Each card contained a single printed word from first-grade or second-grade reading books. The 350 first-grade words were the

vocabulary words listed in the back of the Ginn Basic Reading series: My Little Red Story Book, My Little Green Story Book, My Little Blue Story Book, Little White House, On Cherry Street, and Open the Gate. The 300 second-grade words were from the Ginn series 2¹ Reader, We Are Neighbors, and the 2² Reader, Around the Corner, and from the Scott Foresman 2¹ Reader, Down the Singing River. Vocabulary words were presented to the children in the same order as they were introduced in the books.

Data Recording

The vocabulary words were listed in order on individual data sheets. The teacher recorded a check on the child's data sheet whenever a word was read correctly. No check was made if the child responded incorrectly or if there was no response. Cumulative totals of number of words each child had learned were recorded for each session.

Procedure I

Before each child started to read, the teacher said to him, "I want to see how many words you know." The first 24 word cards in the order of their appearance in the basic readers were presented one at a time to each child. Correct responses were checked on a data sheet in view of the child.

The teacher prepared each child's pack of 24 word cards before each trial. After a word had been said correctly on three consecutive trials, that word card was transferred to the child's pack of "learned" words. The teacher kept both card packs for all the children. Occasionally, due to lack of time for clerical tasks, a "learned" word was not removed immediately from the word pack. Each presentation of 24 words constituted a trial. Trials were

conducted from 8:30 to 10:00 every morning. Since approximately one-half of the class could be tested in a morning, each child had two trials per week. Three trials constituted a session.

The test pack was limited to 24 words through 18 trials (6 sessions) for all of the children. Beginning on trial 19, the word pack was doubled to 48 words for those children who learned at least 20 words in a single session.

Procedure II

On trial 21, before children began to read from their word pack, the teacher stated that the children with three checks after a word would receive that word card to keep at the end of the trial. The children stored their learned word cards in a small drawer cabinet. Very occasionally, the children could use their cards during classroom activities.

Procedure I: Return to this Procedure for 10 Children

In order to determine the effect of giving the cards to the children to keep, ten children were removed from this contingency at the beginning of session 12. These ten children were told by the teacher that she could not give them any word cards. She said she needed to work on them and that she would keep the cards in her desk and return them as soon as she could. This procedure continued for three sessions. During these sessions, several of the ten children admonished the teacher with expressions such as, "Take the cards home at night," or, "Work on the weekend."

The other children in the class still received cards to put into their cabinet drawer.

Procedure II: Return to this Procedure

On the first trial of session 15 the ten children were again

given their learned words in the same manner as were the other children.

Retention Test

Three months after the beginning of the study, between sessions nine and ten, all of the children had accumulated packs of learned word cards. For the next seven school days, one child at a time was presented with his entire pack of learned words. Number of cards in a pack at this time ranged from 81 to 350. A retention score was calculated by subtracting the number of words missed from the total number of words in the child's pack of learned words.

Results

The class learned an average of 487 words during the 51 trials (17 sessions) of this project. As a whole the class learned 99% of the 350 first-grade words and 50% of the 300 second-grade words. Individual children varied greatly in the total number of words that each learned. The fastest learner had learned a total of 724 words through session 17, while the slowest learner had learned a total of 367 words. Every child in the class had successfully completed the first-grade Ginn Basic Reading series by the end of the school year, and many were reading successfully in the second-grade reading series.

The range of number of trials on which one word was presented varied. For many children, words were read correctly on the first session in which they were presented. That is, the word was said correctly on the first day it was presented, and on the two succeeding trial days. However, one word was presented to one child on 18 successive trials, and never read correctly three times in

succession. The school year ended, and the word remained in her test pack.

For most children the effect of keeping their learned word cards was minimal. They learned just as many words during Procedure II as they had during Procedure I. This was not true for all the children. Figure 1 presents the graphs of two children who performed better when given their learned word cards to keep during Procedure II.

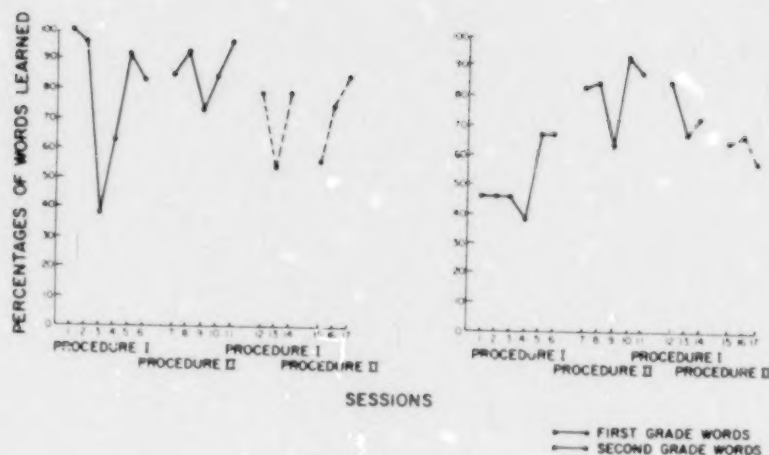


Figure 1. Two individual records of the percentages of first and second-grade vocabulary words learned during each procedure.

The results of the retention test showed that almost all of the children in the class remembered 90% or more of the words in their learned word packs. Results ranged from 86% to 99%. The classroom teacher reported that all children in the class scored well on the Ginn Test given at the end of the year. Scores

designated as "average" on the Ginn Test range from 83 through 100. The lowest score obtained by any child in the present class was 91. Five children scored 100. Ten children scored in the "superior" range, one of them obtaining a perfect score.

Discussion

Further investigation of the effectiveness of the variables influencing vocabulary learning is indicated. This project demonstrated that precise measurement of reading responses can be achieved by the classroom teacher. Daily records of performances for individual children can indicate conditions under which each child learns best. Such continuous measures of individual progress can provide teachers with a tool for monitoring the educational growth of all children.

A DECREASE IN PARENT REMINDERS FOR DRESSING

by

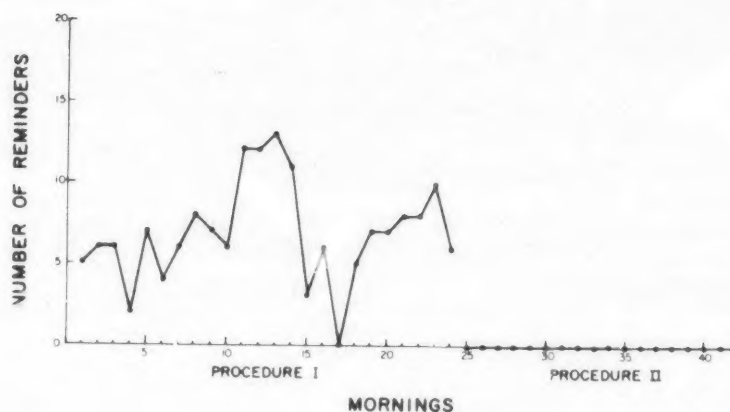
Mrs. Marilyn Cleveland and Mr. and Mrs. Jones

Paul was a six-year-old boy, described by his parents as "taking forever to get dressed in the morning." The mother reported it usually took Paul from five to 30 minutes to get dressed with frequent "reminders" and, occasionally, "yelling reminders."

Procedure I

For three weeks the parents observed, recorded, and graphed the number of times they told Paul to get dressed, and the number of minutes that it took Paul to dress in the morning.

Figure 1 shows that the parents spoke to Paul zero to 13 times, with the average being seven times in 24 days.



Procedure II

At the beginning of day 25, Paul was told that an oven timer would be set for three minutes every morning after he was awakened. If Paul was dressed before the timer went off, he would earn 5¢ which could be saved towards buying a bicycle light. On days he took longer than three minutes to dress, he would not earn the 5¢. Figure 1 shows that the number of reminders the parents gave Paul immediately decreased to zero under this procedure.

Discussion

At the end of the school year, the parents reported to the teacher that dressing time was no longer a problem at home. The mother said, "It helped us both through the rest of the year. I stopped yelling at him, and he was very proud to dress in such a short time." Paul earned enough money to purchase the light for his bicycle. He commented to his mother after purchasing the light, "It was fun."

DAWDLING AT SUPPERTIME

by

Mrs. Shirley Humphreys and Mr. Dittrich

Ken was a four-year-old boy, described by his father as "a real poke" at the supper table. This dawdling behavior was defined as: taking 30 minutes or more to finish eating his supper.

Procedure I

For nine days the father recorded and graphed the number of minutes Ken spent eating supper. Figure 1 shows that he once took 90 minutes, and once, 60 minutes; on four days he took 50 minutes. Eating time in this period averaged 49 minutes.

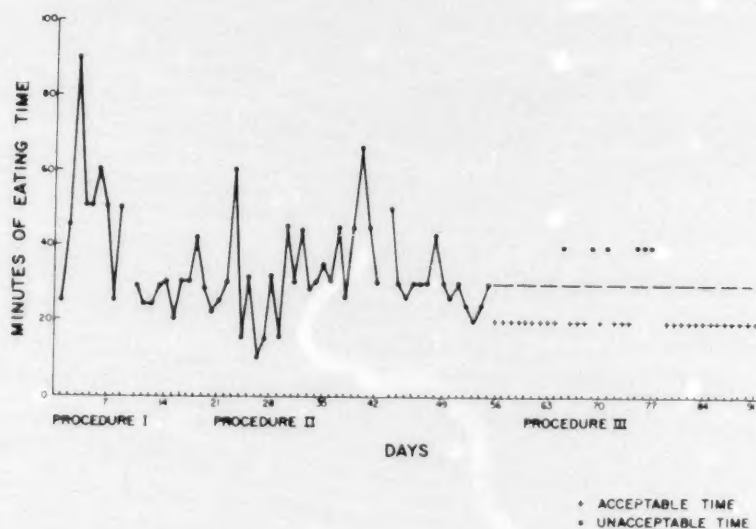


Figure 1. A record of Ken's time to complete supper.

Procedure II

On day 10 Ken was given a chart. He was told he could stick

a colored star on the chart each time he finished his supper in 30 minutes or less. On days that he took longer, his father put a black mark on the chart.

At the time these procedures started, Ken and his family were anticipating a visit from grandparents. Ken's father had suggested that his son might have expected to use acceptable eating time to impress his grandparents. Figure 1 shows that for the first eight days of this procedure, Ken never took more than 30 minutes to eat his supper. For these eight days, eating time dropped to an average of 27 minutes.

On day 18 the family learned that the grandparents' visit had to be cancelled. Ken's eating time became variable. For the next 25 days of this period, eating time averaged 33 minutes, and ranged from 10 minutes to 66 minutes.

Over the entire 33 days, Ken averaged 32 minutes to complete his supper.

Procedure III

The father reported that on or about day 43, a new agreement was made with Ken. He was told when he earned five stars on five successive days, a black mark, already on the chart, would be erased. Fifteen successive stars would eliminate all the black marks on the chart. For the next two weeks, Ken usually completed his supper in 30 minutes or less. This met his parents' criterion for acceptable eating time.

Beginning on day 57, Ken's eating time was recorded as acceptable ("+" in figure 1) when he completed his supper in 30 minutes or less. Otherwise, the time was recorded as unacceptable ("0" in figure 1). For the final 35 days of the study, his eating time was acceptable 82% of the time.

Discussion

Ken's father reported eating time generally ranged between 25 and 30 minutes. He concluded, "The stars eventually really dominated those ugly black marks." The parents also agreed that Ken's general eating behavior had improved greatly during the period of this study.